

**California Department of Justice
CURES Information Exchange Web Service
Implementation Guide V 2.3**

September 2018

Table of Contents

1	INTRODUCTION	3
1.1	PURPOSE.....	3
2	SYSTEM OVERVIEW	3
2.1	SYSTEM BACKGROUND	3
2.2	DEFINITIONS, ACRONYMS, AND ABBREVIATIONS.....	3
2.3	APPLICATION OVERVIEW.....	4
3	AUTHENTICATION.....	8
3.1	SECURITY LAYERS.....	8
3.1.1	Network Security.....	8
3.1.2	Communication Security.....	8
3.1.3	Access Security	8
4	AUDITING	9
4.1	AUDIT DATA	9
4.2	PATIENT ACTIVITY REPORT AUDIT	9
5	DATA MAPPING.....	10
5.1	DATA MAPPING.....	10
5.1.1	Request Mapping of CURES Data to NCPDP Format.....	10
5.1.2	Response Mapping of CURES Data to NCPDP Format.....	11
6	HTTP HEADER	12
6.1.1	HTTP Header.....	12
7	ERROR AND STATUS CODES	13
8	SEARCH PATIENT.....	15
9	GET PATIENT ACTIVITY REPORT	23
10	CHECK USER STATUS	26
	CheckUserStatus Message Samples:.....	26
11	CHECK ENTITY STATUS.....	28
12	AUDIT PATIENT ACTIVITY REPORT	30
13	TESTING.....	33
13.1	GETTING STARTED.....	33

1 INTRODUCTION

1.1 PURPOSE

The purpose of this Implementation Guide is to provide a comprehensive set of instructions to allow integration of Controlled Substance Utilization Review and Evaluation System (CURES) information with qualified Health Information Technology (HIT) systems.

2 SYSTEM OVERVIEW

2.1 SYSTEM BACKGROUND

The Controlled Substance Utilization Review and Evaluation System (CURES) is a database containing information about Schedule II, III, and IV controlled substance prescriptions dispensed to patients, as reported by the dispensing pharmacy, clinic, or other dispenser pursuant to Health and Safety Code section 11165(d) (“CURES data”). The CURES Program grants authorized health care practitioners and pharmacists access to query the CURES database to assist them in their efforts to ensure appropriate prescribing, ordering, administering, furnishing, and dispensing of controlled substances.

Assembly Bill 40 requires the Department of Justice to establish a method of system integration whereby approved health care practitioners and pharmacists may use a qualified health information technology system to access information in the CURES database. As a prerequisite to system integration, each entity that operates a health information technology system must certify that it has entered into a memorandum of understanding with the California Department of Justice (DOJ) addressing the technical specifications of the system to ensure the security of CURES data in the CURES database and the secure transfer of CURES data from the CURES database.

2.2 DEFINITIONS, ACRONYMS, AND ABBREVIATIONS

The Definitions, Acronyms, and Abbreviations section lists terms used in the document.

TERM/ABBREVIATION	DESCRIPTION
API	Application Program Interface
CURES	Controlled Substance Utilization Review and Evaluation System
DEA	Drug Enforcement Agency
DOB	Date of Birth
DOJ	Department of Justice
HIT	Health Information Technology
HTTP	Hypertext Transfer Protocol
HTTPS	HTTPS is not, strictly, a separate protocol, as the data is still transferred using HTTP; however, instead of using plain text socket communication, the session data

TERM/ABBREVIATION	DESCRIPTION
	is encrypted using a version of the Secure Socket Layer (SSL)/Transport Layer Security (TLS) protocols, thus ensuring reasonable protection more than the HTTP
IP	Internet Protocol
MOU	Memorandum of Understanding
NCPDP	National Council for Prescription Drug Programs
PAR	Patient Activity Report
PDMP	Prescription Drug Monitoring Program
PKI	Public Key Infrastructure
REST	Representational state transfer
SSL	Secure Socket Layer
TLS	Transport Layer Security
XML	Extensible Markup Language

2.3 APPLICATION OVERVIEW

The CURES Program will provide systems integration with the HIT community through RESTful web services. For the initial phase, the following web services will be available:

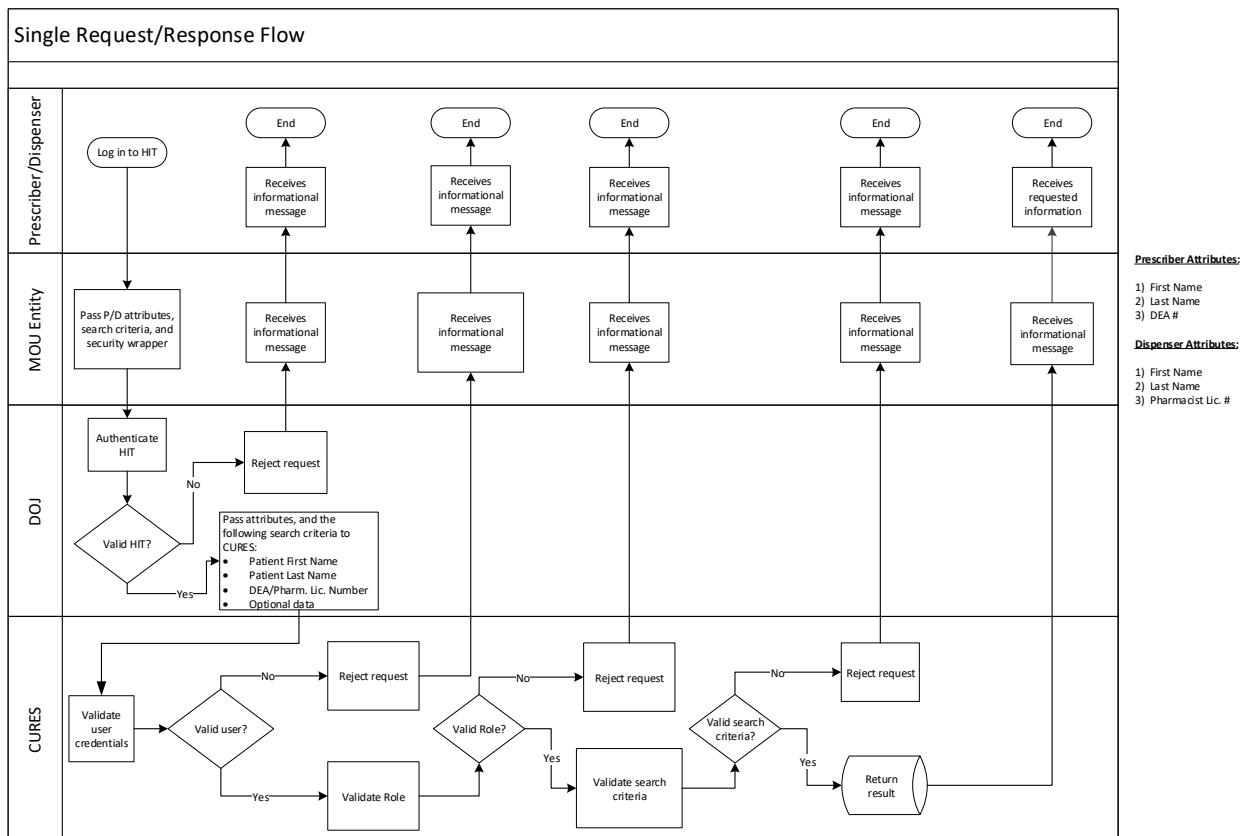
- SearchPatient – searches for a patient for a given timeframe
- GetPatientActivityReport - retrieves a patient controlled substance history
- CheckUserStatus - retrieves the CURES user account status
- CheckRequestingEntityStatus - retrieves the HIT system account status
- AuditPatientActivityReport – notification confirming receipt of CURES data by the health care practitioner or pharmacist who submitted the query

Information will be exchanged using NCPDP SCRIPT 10.6 XML format. Searches can be executed for up to a 12-month period using partial or exact match modes.

The CURES web service will support two patient search use cases:

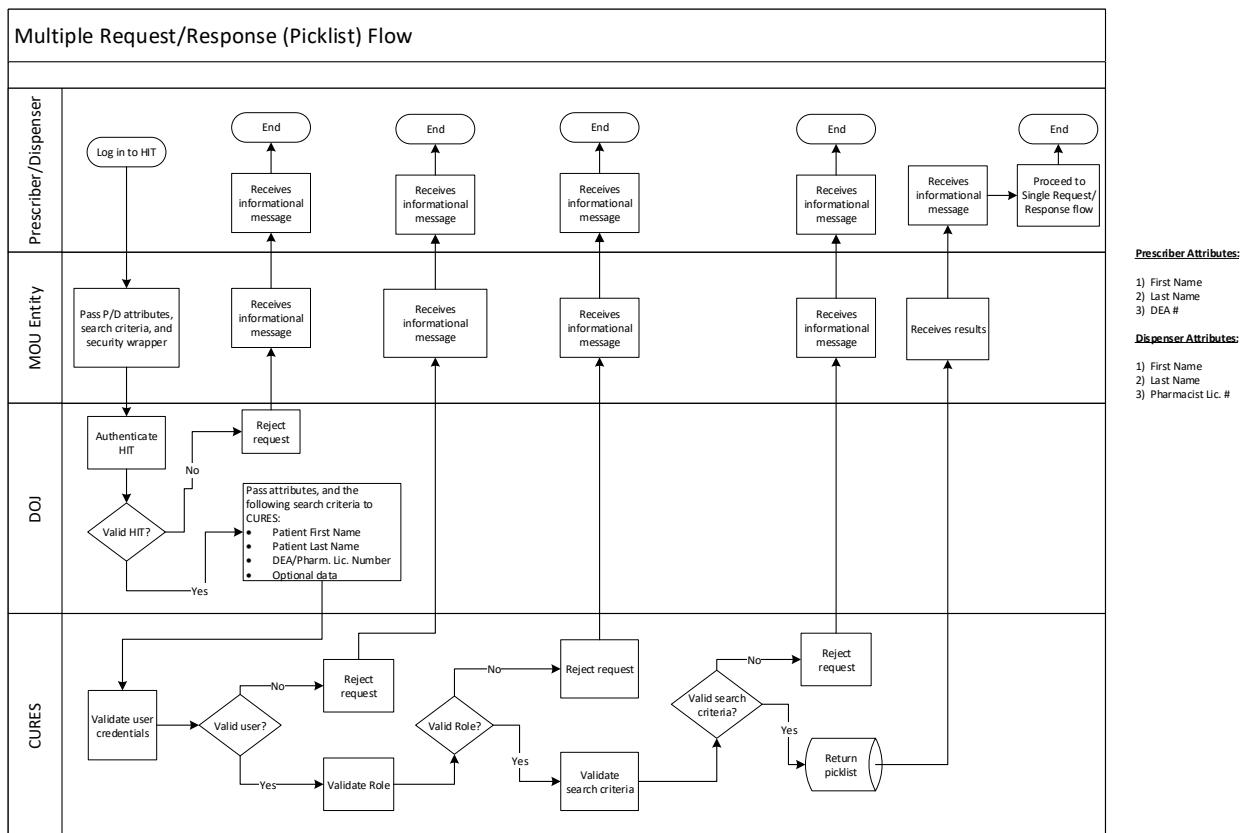
- Query Use Case 1 – Single Request/Response
 - Use Case 1 follows the NCPDP standard where every search patient request returns either no match or a single match. The result will be either an error message stating there is no match, or will return all of the prescription history associated to the matched entity.

Figure 1 – Single Request/Response



- Query Use Case 2 – Multiple Matches (Picklist)

- Use Case 2 supports multiple matches via a pick list. In this use case, a patient search returns multiple entities using a NCPDP-like message structure. The requesting entity would then send one or multiple single requests to retrieve the prescription history associated with the matched entity.
- For HIT systems that cannot support this functionality, a response message redirecting the health care practitioner/pharmacist to the CURES web portal is returned.

Figure 2 – Multiple Request/Response

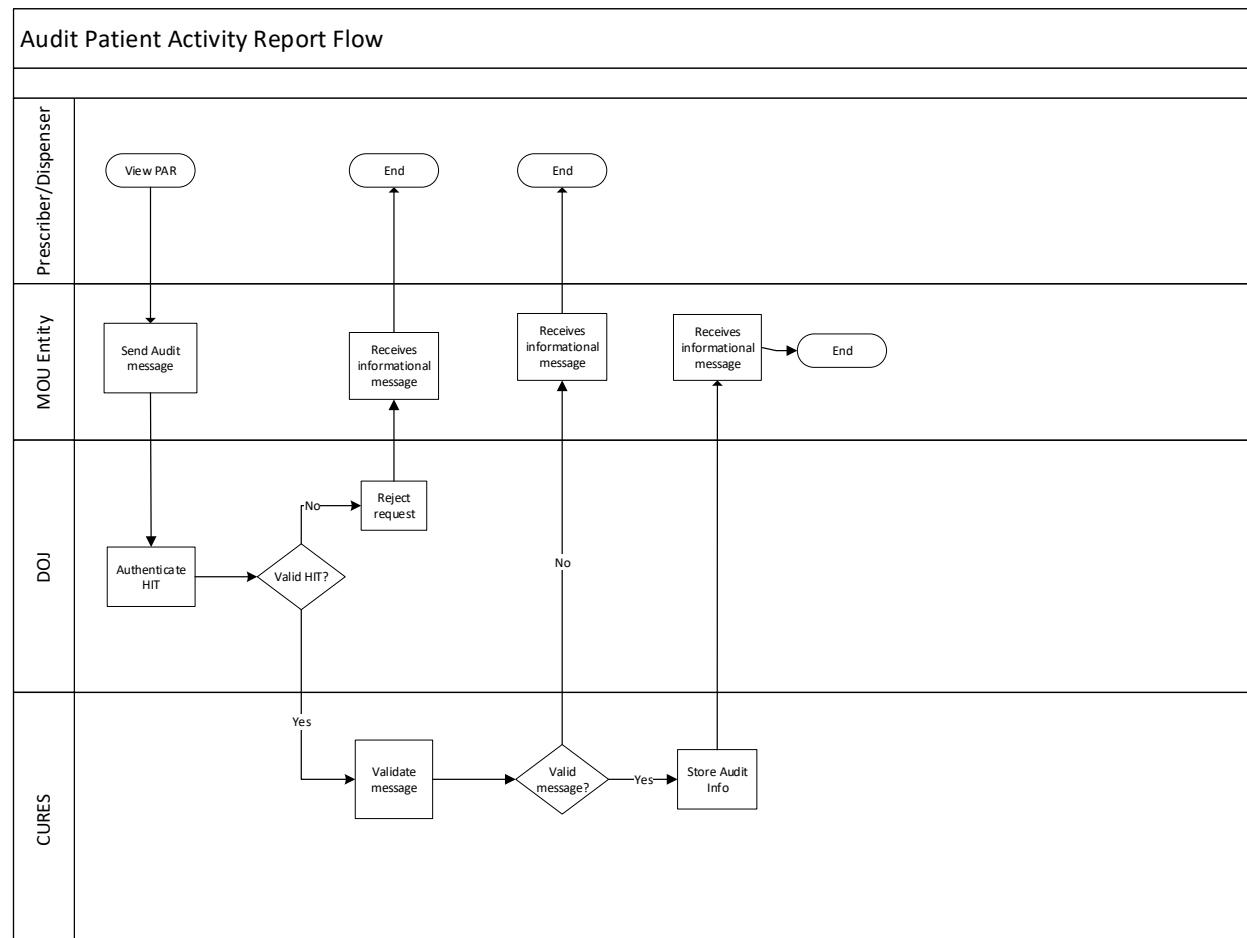
Account Status Check

In addition to the query use cases, the CURES web service will provide two web services to query for account status. The first allows HIT systems to query for the CURES user account status. The second allows HIT systems to query for their own account status. These services allow HIT systems to troubleshoot and alter process flows based on account status.

Audit Patient Activity Report

The Audit Patient Activity Report web service call is used in conjunction with the patient activity report. HIT systems are required to submit a notification confirming the receipt of CURES data by the health care practitioner or pharmacist who submitted the query. For purposes of complying with this requirement, there can be only one health care practitioner identified with each query, and, the health care practitioner or pharmacist receiving the CURES data must be the health care practitioner or pharmacist who submitted the initial query.

Figure 3 – Audit Patient Activity Report

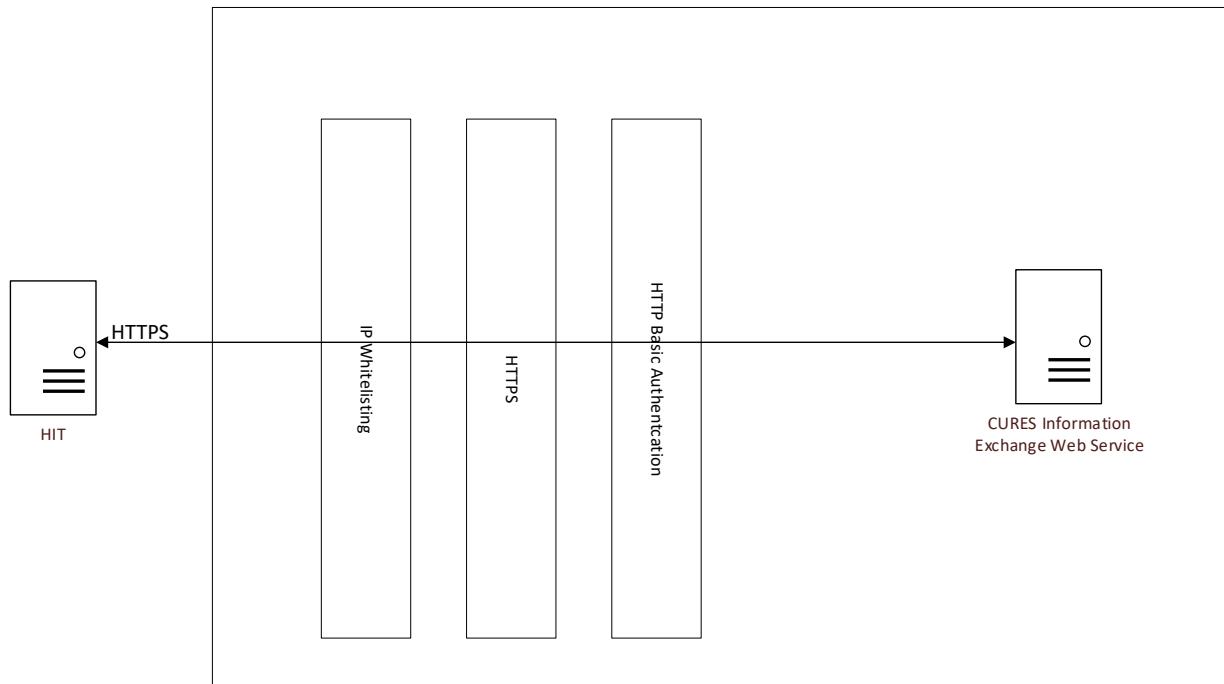


3 AUTHENTICATION

3.1 SECURITY LAYERS

The CURES web service has three layers of security. Each layer is built on top of the previous layer to ensure the secure exchange of information. Each REST endpoint is stateless, resulting in every request going through all three layers.

Figure 4 – Security Layers



3.1.1 Network Security

IP whitelisting will ensure only enrolled HIT systems can communicate with the CURES web service.

3.1.2 Communication Security

Communication between the CURES web service and the HIT systems will be over the Internet. As a result, Transport Layer Security (TLS) is required to ensure secure communication between the CURES web services and HIT.

3.1.3 Access Security

After entering into a MOU with the Department of Justice, the entity operating the HIT system will be provisioned with a CURES web service account. Every RESTful web service request should be accompanied with the CURES web service credentials. These credentials will be validated to ensure the account is valid and in good standing.

4 AUDITING

4.1 AUDIT DATA

The HIT system is required to provide the following details for every patient request:

1. User Data
 - a. The date of the query
 - b. The time of the query
 - c. Requesting entity operating the HIT system
 - d. The identification of the health care practitioner or pharmacist for whom the system is making the query
2. Required Query Data
 - a. Patient First Name
 - b. Patient Last Name
 - c. Patient Date of Birth
3. Optional Data Fields
 - a. Patient Street Address
 - b. Patient City
 - c. Patient State
 - d. Patient Zip Code
 - e. Patient Gender

The CURES web service will capture all of this information. The application will also track patient searches and their associated Patient Activity Reports (PAR).

4.2 PATIENT ACTIVITY REPORT AUDIT

HIT systems are required to submit a notification confirming the receipt of CURES data by the health care practitioner or pharmacist who submitted the query. For purposes of complying with this requirement, there can be only one health care practitioner identified with each query, and, the health care practitioner or pharmacist receiving the CURES data must be the health care practitioner or pharmacist who submitted the initial query.

The HIT system will send the following data attributes for the prescriber/pharmacist:

1. Prescriber/Pharmacist First Name
2. Prescriber/Pharmacist Last Name
3. DEA/Pharmacist State License Number

The HIT system will send the following patient details:

1. Patient Account Number sent in the original report
2. Patient First Name
3. Patient Last name

4. Patient Date of Birth
5. Optional Data Fields
 - a. Patient Street Address
 - b. Patient City
 - c. Patient State
 - d. Patient Zip
 - e. Patient Gender

5 DATA MAPPING

5.1 DATA MAPPING

The CURES Information Exchange Web Service will use the following mapping to transform data from CURES to the NCPDP request and response messages.

5.1.1 Request Mapping of CURES Data to NCPDP Format

Section		CURES	NCPDP
Header	HIT System Identification	HIT System Identifier	SCRIPT.Header.From
		HIT System hospital/facility	SCRIPT.Header.Security.Sender.SecondaryIdentification
		Description of facility(Emergency, ICU)	SCRIPT.Header.Security.Sender.TertiaryIdentification
Body	Requesting User	First Name	SCRIPT.Body.RxHistoryRequest.Prescriber.FirstName
		Last Name	SCRIPT.Body.RxHistoryRequest.Prescriber.LastName
		DEA Number	SCRIPT.Body.RxHistoryRequest.Prescriber.Identification.DEANumber
		User Id in the Requesting Entity	SCRIPT.Header.Security.Username
	Patient	First Name	SCRIPT.Body.RxHistoryRequest.Patient.Name.FirstName
		Last Name	SCRIPT.Body.RxHistoryRequest.Patient.Name.LastName
		DOB	SCRIPT.Body.RxHistoryRequest.Patient.DateOfBirth.Date
		Gender	SCRIPT.Body.RxHistoryRequest.Patient.Gender
		Address Line 1	SCRIPT.Body.RxHistoryRequest.Patient.Address.AddressLine1
		City	SCRIPT.Body.RxHistoryRequest.Patient.Address.City
		State	SCRIPT.Body.RxHistoryRequest.Patient.Address.State
	Search	Zip	SCRIPT.Body.RxHistoryRequest.Patient.Address.ZipCode
	Search	Search Time Range Start	SCRIPT.Body.RxHistoryRequest.BenefitsCoordination.EffectiveDate

5.1.2 Response Mapping of CURES Data to NCPDP Format

Section	CURES	NCPDP
Header	N/A	SCRIPT.Header
Patient	First Name	SCRIPT.Body.RxHistoryResponse.Patient.Name.FirstName
	Last Name	SCRIPT.Body.RxHistoryResponse.Patient.Name.LastName
	DOB	SCRIPT.Body.RxHistoryResponse.Patient.DateOfBirth.Date
	Gender	SCRIPT.Body.RxHistoryResponse.Patient.Gender
	Address Line 1	SCRIPT.Body.RxHistoryResponse.Patient.Address.AddressLine1
	City	SCRIPT.Body.RxHistoryResponse.Patient.Address.City
	State	SCRIPT.Body.RxHistoryResponse.Patient.Address.State
	Zip	SCRIPT.Body.RxHistoryResponse.Patient.Address.ZipCode
	Patient_id	SCRIPT.Body.RxHistoryResponse.Patient.Identification.PatientAccountNumber
	Date Filled	SCRIPT.Body.RxHistoryResponse.MedicationDispensed.LastFillDate
Prescription (1...300)	Date Sold	SCRIPT.Body.RxHistoryResponse.MedicationDispensed.SoldDate
	Days Supply	SCRIPT.Body.RxHistoryResponse.MedicationDispensed.DaysSupply
	Drug Form	SCRIPT.Body.RxHistoryResponse.MedicationDispensed.DrugCoded.FormCode
	Drug Name	SCRIPT.Body.RxHistoryResponse.MedicationDispensed.DrugDescription
	Drug Strength	SCRIPT.Body.RxHistoryResponse.MedicationDispensed.DrugCoded.Strength
	Drug Quantity	SCRIPT.Body.RxHistoryResponse.MedicationDispensed.Quantity.Value
	Refill Number	SCRIPT.Body.RxHistoryResponse.MedicationDispensed.Refills.Qualifier=R
	Refills Authorized	SCRIPT.Body.RxHistoryResponse.MedicationDispensed.Refills.Qualifier=A
	Additional Meta Data (Rx Number, Payment, and species) a key value separated by ;Payment Method	SCRIPT.Body.RxHistoryResponse.MedicationDispensed.Note SCRIPT.Body.RxHistoryResponse.MedicationDispensed.Note
	Prescriber's Name	SCRIPT.Body.RxHistoryResponse.MedicationDispensed.Prescriber.Name
Body	Prescriber's DEA	SCRIPT.Body.RxHistoryResponse.MedicationDispensed.Prescriber.Identification.DEANumber
	Pharmacy Name	SCRIPT.Body.RxHistoryResponse.MedicationDispensed.Pharmacy.StoreName
	Pharmacy Number	SCRIPT.Body.RxHistoryResponse.MedicationDispensed.Pharmacy.Identification.StateLicenseNumber
Search	Search Time Range Start	SCRIPT.Body.RxHistoryResponse.BenefitsCoordination.EffectiveDate

	Search Time Range End	SCRIPT.Body.RxHistoryResponse.BenefitsCoordination.ExpirationDate
--	-----------------------	---

6 HTTP HEADER

6.1.1 HTTP Header

The HTTP header will contain the following information for each transaction:

HTTP HEADER	
Authorization	Base64 encoded HTTP Basic authentication
X-payload_format	Such as NCPDP, NIEM, FHIR, etc.
X-search_mode	Exact or Partial
X-picklist	Y or N

The X-payload_format header will default to NCPDP as this is the only supported format at this time. The X-search_mode header will default to Partial if not specified. The X-picklist header will default to N if not specified.

7 ERROR AND STATUS CODES

The NCPDP error and status messages consist of a Code, DescriptionCode, and Description. The CURES web service will use the NCPDP defined codes to populate the Code element. The following table is from the NCPDP “external-code-list-201701” document, which describes the list of values for the Code field in both error and status structure. Non-functional errors will result in an HTTP error message.

Y. APPENDIX Y – STATUS CODES

NAME OF VALUE	VALUES	STATUSCODE	TRANSACTIONERRORCODE	VERIFYSTATUSCODE	COMMENTS
Transaction successful	000	X			
Transaction successful, message(s) waiting to be retrieved	001	X			Not used by Benefit Integration Standard
No more messages	002	X			Not used by Benefit Integration Standard
Transaction successful, no messages to be retrieved	003	X			Not used by Benefit Integration Standard
Transaction successful, password soon to expire	005	X			Not used by Benefit Integration Standard
Successful – accepted by ultimate receiver	010	X		X	
Communication problem - try again later	600		X		
Receiver unable to process	601		X		
Receiver System Error	602		X		
Configuration Error	700		X		
Transaction rejected	900		X		

The DescriptionCode and Description fields will be used to provide system-specific details regarding the error or status. The DescriptionCode values can be between 001 – 475. The CURES web service breaks down the DescriptionCodes into the following four categories:

Description Code	Category
001 - 099	Security
100 - 299	Communication
300 - 400	Application
400 - 475	Reserved

Specifically, the application has defined the following DescriptionCodes and Descriptions:

DescriptionCode	Description
002	Authorization error – user status is not active.
100	System error
200	HTTP message
300	Validation error – Invalid request or Missing data
301	No results found
302	Multiple patient matches. Please search via https://cures.doj.ca.gov
320	Either patient_first_name or patient_last_name must be populated
321	patient_dob is required
330	Validation error – Invalid patient Id
340	Couldn't find the matched SearchPatient
341	24 hours have lapsed since initial inquiry. Re-initiate PAR request.
360	User CURES application is pending approval
361	Active status, user has access
362	User CURES account is suspended
363	User must complete Annual Update on CURES website to receive data
364	User credentials do not match any CURES account
370	MOU Entity account active.
371	MOU Entity account inactive. Access denied.
400	HTTP error

8 SEARCH PATIENT

The search patient request uses the RxHistoryRequest message which contains three major sections:

- Prescriber
- Patient
- BenefitsCoordination

The following fields are required in the Prescriber section of a prescriber query:

- Prescriber DEA Number, as registered in CURES
- Prescriber First Name, as registered in CURES
- Prescriber Last Name, as registered in CURES

The following fields are required in the Pharmacy section of a dispenser query:

- Pharmacist State License Number
- Pharmacist First Name, as registered in CURES
- Pharmacist Last Name, as registered in CURES

The system uses these fields to identify the CURES account of the prescriber or pharmacist. If the CURES account cannot be found, an error message is returned.

In the Patient section, the patient first name, last name, and DOB are required fields.

The BenefitsCoordination section is used to specify the patient search period. The maximum, and default, search period is 12 months. If the search period is greater than the maximum or not specified, the default value is used.

Upon successful processing and execution of RxHistoryRequest, the system returns an RxHistoryResponse message with the associated MedicationDispensed if there is only one patient that matches the search criteria. In the case where there are no patients matching the search, a Status message is returned with the corresponding description code. For HIT systems that support a picklist, where there is more than one patient match, a picklist is returned. For those HIT systems that do not support picklists, the CURES web service will return a Status message with the corresponding description code.

If the error is related to authentication or parsing the message, the CURES system returns an HTTP error.

If there is a functional failure, the system returns a NCPDP Error message.

SearchPatient Message Samples

The following is an example of a SearchPatient request issued by a prescriber.

[NOTE: While there are additional data element fields available, those fields are not mandatory.]

CURL <CURES-URL>/SEARCHPATIENT

```
-H "AUTHORIZATION: BASIC <BASE64CREDENTIALS>"  
-H "CONTENT-TYPE: APPLICATION/XML" \  
-H "ACCEPT: APPLICATION\XML" \  
-H "X-PAYLOAD_FORMAT:NCPDP" \  
-H "X-SEARCH_MODE:PARTIAL" \  
-H "X-PICKLIST:N"  
-D @PATIENT_REQUEST.XML
```

PATIENT_REQUEST.XML:

```
<?XML VERSION="1.0"?>  
<MESSAGE VERSION="010" RELEASE="006" XMLNS="HTTP://WWW.NCPDP.ORG/SCHEMA/SCRIPT">  
  <HEADER>  
    <TO QUALIFIER="ZZZ">CURES</TO>  
    <FROM QUALIFIER="ZZZ">ACME HIT</FROM>  
    <MESSAGEID>217823</MESSAGEID>  
    <SENTTIME>2018-05-08T19:49:01.0Z</SENTTIME>  
    <SECURITY>  
      <USERTOKEN>  
        <USERNAME>DRJOE@ACME.COM</USERNAME>  
      </USERTOKEN>  
      <SENDER>  
        <SECONDARYIDENTIFICATION>HOSPITALA</SECONDARYIDENTIFICATION>  
      </SENDER>  
      <RECEIVER>  
        <SECONDARYIDENTIFICATION>CURES</SECONDARYIDENTIFICATION>  
      </RECEIVER>  
    </SECURITY>  
  </HEADER>  
  <BODY>  
    <RxHISTORYREQUEST>  
      <PREScriber>  
        <IDENTIFICATION>  
          <DEANUMBER>567890</DEANUMBER>  
        </IDENTIFICATION>  
        <NAME>  
          <LASTNAME>SMITH</LASTNAME>  
          <FIRSTNAME>KEVIN</FIRSTNAME>  
        </NAME>  
      </PREScriber>  
      <PATIENT>  
        <NAME>
```

```

<LASTNAME>DOE</LASTNAME>
<FIRSTNAME>JANE</FIRSTNAME>
</NAME>
<DATEOFBIRTH>
    <DATE>1978-06-04</DATE>
</DATEOFBIRTH>
</PATIENT>
<BENEFITSCOORDINATION>
    <EFFECTIVEDATE>
        <DATE>2015-01-01</DATE>
    </EFFECTIVEDATE>
    <EXPIRATIONDATE>
        <DATE>2015-10-08</DATE>
    </EXPIRATIONDATE>
</BENEFITSCOORDINATION>
</RxHISTORYREQUEST>
</BODY>
</MESSAGE>

```

Sample Response with one result:

```

<MESSAGE VERSION="010" RELEASE="006">
<HEADER>
    <To QUALIFIER="ZZZ">ACME HIT</To>
    <From QUALIFIER="ZZZ">CURES</From>
    <MESSAGEID>217824</MESSAGEID>
    <RELATESTOMESSAGEID>217823</RELATESTOMESSAGEID>
    <SENTTIME>2018-05-08T19:50:10.0Z</SENTTIME>
    <SECURITY>
        <USERTOKEN>
            <USERNAME>DRJOE@ACME.COM</USERNAME>
        </USERTOKEN>
        <SENDER>
            <SECONDARYIDENTIFICATION>HOSPITALA</SECONDARYIDENTIFICATION>
        </SENDER>
    </SECURITY>
</HEADER>
<BODY>
    <RxHISTORYRESPONSE>
        <RESPONSE>
            <APPROVED/>
        </RESPONSE>
        <PATIENT>
            <IDENTIFICATION>
                <PATIENTACCOUNTNUMBER>12345</PATIENTACCOUNTNUMBER>

```

```
</IDENTIFICATION>
<NAME>
    <FIRSTNAME>JANE</FIRSTNAME>
    <LASTNAME>DOE</LASTNAME>
</NAME>
<GENDER>F</GENDER>
<DATEOFBIRTH>
    <DATE>1978-06-04</DATE>
</DATEOFBIRTH>
<ADDRESS>
    <ADDRESSLINE1>123 MAIN ST</ADDRESSLINE1>
    <CITY>SACRAMENTO</CITY>
    <STATE>CA</STATE>
    <ZIPCODE>95814</ZIPCODE>
</ADDRESS>
</PATIENT>
<BENEFITSCOORDINATION>
    <EFFECTIVEDATE>
        <DATE>2017-06-20</DATE>
    </EFFECTIVEDATE>
    <EXPIRATIONDATE>
        <DATE>2018-06-20</DATE>
    </EXPIRATIONDATE>
</BENEFITSCOORDINATION>
<MEDICATIONDISPENSED>
    <DRUGDESCRIPTION>HYDROCODON 10-500 </DRUGDESCRIPTION>
    <DRUGCODED>
        <STRENGTH>500</STRENGTH>
        <FORMCODE>TAB</FORMCODE>
    </DRUGCODED>
    <QUANTITY>
        <VALUE>50</VALUE>
        <CODELISTQUALIFIER>38</CODELISTQUALIFIER>
        <UNITSOURCECODE>AC</UNITSOURCECODE>
    </QUANTITY>
    <DAYSSUPPLY>30</DAYSSUPPLY>
    <NOTE>SPECIES:HUMAN;PAYMENTMETHOD:CREDIT;Rx#:0458789</NOTE>
    <REFILLS>
        <QUALIFIER>A</QUALIFIER>
        <VALUE>2</VALUE>
    </REFILLS>
    <REFILLS>
        <QUALIFIER>R</QUALIFIER>
        <VALUE>2</VALUE>
    </REFILLS>
```

```
<LASTFILLDATE>
    <DATE>2018-05-01</DATE>
</LASTFILLDATE>
<SOLDDATE>
    <DATE>2018-05-01</DATE>
</SOLDDATE>
<PHARMACY>
    <STORENAME>CVS</STORENAME>
    <IDENTIFICATION>
        <STATELICENSENUMBER>123456</STATELICENSENUMBER>
    </IDENTIFICATION>
</PHARMACY>
<PRESCRIBER>
    <NAME>
        <FIRSTNAME>JOHN</FIRSTNAME>
        <LASTNAME>DOE</LASTNAME>
    </NAME>
    <IDENTIFICATION>
        <DEANUMBER>1234566</DEANUMBER>
    </IDENTIFICATION>
</PRESCRIBER>
</MEDICATIONDISPENSED>
</RxHISTORYRESPONSE>
</BODY>
</MESSAGE>
```

Sample Response with Multiple Results for Picklist:

For this type of response, the list of patients in xml format is embedded inside the GetMessage.

```

<MESSAGE VERSION="010" RELEASE="006">
  <HEADER>
    <To QUALIFIER="ZZZ"> ACME HIT </To>
    <From QUALIFIER="ZZZ"> CURES </From>
    <MESSAGEID>217825</MESSAGEID>
    <SENTTIME>2018-05-08T20:49:10.0Z </SENTTIME>
    <SECURITY>
      <USERNAMETOKEN>
        <USERNAME>DRJOE@ACME.COM</USERNAME>
      </USERNAMETOKEN>
      <SENDER>
        <SECONDARYIDENTIFICATION>HOSPITALA</SECONDARYIDENTIFICATION>
      </SENDER>
    </SECURITY>
  </HEADER>
  <BODY>
    <GETMESSAGE>
      <!-- THIS IS EMBEDDED XML TEXT. IT IS BEING CONVERTED FOR READABILITY -->
      <XML>
        <PATIENTSCONTAINER>
          <PATIENTS>
            <IDENTIFICATION>
              <PATIENTACCOUNTNUMBER>12345</PATIENTACCOUNTNUMBER>
            </IDENTIFICATION>
            <NAME>
              <FIRSTNAME>JANE</FIRSTNAME>
              <LASTNAME>DOE</LASTNAME>
            </NAME>
              <DATEOFBIRTH>1978-06-04</DATEOFBIRTH>
              <GENDER>F</GENDER>
              <ADDRESS>
                <ADDRESSLINE1>123 MAIN ST</ADDRESSLINE1>
                <CITY>SACRAMENTO</CITY>
                <STATE>CA</STATE>
                <ZIPCODE>95814</ZIPCODE>
              </ADDRESS>
            </PATIENTS>
            <PATIENTS>
              <IDENTIFICATION>
                <PATIENTACCOUNTNUMBER>78900</PATIENTACCOUNTNUMBER>
              </IDENTIFICATION>
            </PATIENTS>
          </PATIENTSCONTAINER>
        </XML>
      </GETMESSAGE>
    </BODY>
  </MESSAGE>

```

```
<NAME>
    <FIRSTNAME>JANE</FIRSTNAME>
    <LASTNAME>DOE</LASTNAME>
</NAME>
<DATEOFBIRTH>1978-06-04</DATEOFBIRTH>
<GENDER>F</GENDER>
<ADDRESS>
    <ADDRESSLINE1>123 MAIN ST APT#3</ADDRESSLINE1>
    <CITY>SACRAMENTO</CITY>
    <STATE>CA</STATE>
    <ZIPCODE>95814</ZIPCODE>
</ADDRESS>
</PATIENTS>
</PATIENTSCONTAINER>
</XML>
</GETMESSAGE>
</BODY>
</MESSAGE>
```

Sample Response with Multiple Results for non-Picklist:

```
<MESSAGE VERSION="010" RELEASE="006">
<HEADER>
    <To QUALIFIER="ZZZ"> ACME HIT </To>
    <From QUALIFIER="ZZZ"> CURES </From>
    <MESSAGEID>217826</MESSAGEID>
    <SENTTIME>2018-05-08T20:50:10.0Z </SENTTIME>
</HEADER>
<BODY>
    <STATUS>
        <CODE>000</CODE>
        <DESCRIPTIONCODE>302</DESCRIPTIONCODE>
        <DESCRIPTION>MULTIPLE PATIENT MATCHES. PLEASE SEARCH VIA
        HTTPS://CURES.DOJ.CA.GOV</DESCRIPTION>
    </STATUS>
</BODY>
</MESSAGE>
```

Sample Response with No Results:

```
<MESSAGE VERSION="010" RELEASE="006">
<HEADER>
    <To QUALIFIER="ZZZ"> ACME HIT </To>
    <From QUALIFIER="ZZZ"> CURES </From>
    <MESSAGEID>217827</MESSAGEID>
```

```
<SENTTIME>2018-05-08T20:52:10.0Z </SENTTIME>
</HEADER>
<BODY>
  <STATUS>
    <CODE>000</CODE>
    <DESCRIPTIONCODE>301</DESCRIPTIONCODE>
    <DESCRIPTION>NO RESULT FOUND</DESCRIPTION>
  </STATUS>
</BODY>
</MESSAGE>
```

Sample Error Response:

```
<MESSAGE VERSION="010" RELEASE="006">
<HEADER>
  <To QUALIFIER="ZZZ">ACME HIT</To>
  <From QUALIFIER="ZZZ">CURES</From>
  <MESSAGEID>217828</MESSAGEID>
  <SENTTIME>2018-05-08T20:53:10.0Z</SENTTIME>
</HEADER>
<BODY>
  <ERROR>
    <CODE> 900</CODE>
    <DESCRIPTIONCODE>330</DESCRIPTIONCODE>
    <DESCRIPTION>VALIDATION ERROR – INVALID PATIENT ID</DESCRIPTION>
  </ERROR>
</BODY>
</MESSAGE>
```

9 GET PATIENT ACTIVITY REPORT

GetPatientActivityReport should follow a successful SearchPatient call to retrieve a match from the picklist response. Each SearchPatient picklist is valid for 24 hours. After 24 hours, another search must be executed to retrieve a fresh patient picklist to be used with the GetPatientActivityReport web service.

The following is the process flow for the GetPatientActivityReport:

- The SearchPatient function returns a patient picklist
- The user picks patient(s) from the picklist by the PatientAccountNumber data element
- The selected patient(s) are the input parameters for GetPatientActivityReport function
- NCPDP format cannot accommodate multiple patients. If there are multiple matches from the picklist, the requesting entity must call this function multiple times, one for each match.

Upon successful execution, the method shall return a RxHistoryResponse message. If there is a failure, a NCPDP Error message is returned with the associated error code, description code, and description.

GetPatientActivityReport Message Samples:

```
CURL <CURES-URL>/GETPATIENTACTIVITYREPORT \
-H "AUTHORIZATION: BASIC <BASE64CREDENTIALS>" \
-H "CONTENT-TYPE: APPLICATION/XML" \
-H "ACCEPT: APPLICATION\XML" \
-H "X-PAYOUT_FORMAT:NCPDP" \
-H "X-SEARCH_MODE:PARTIAL" \
-H "X-PICKLIST:N"
-D @PATIENT_ACTIVITY_REPORT.XML
```

PATIENT_ACTIVITY_REPORT.XML:

```
<?XML VERSION="1.0"?>
<MESSAGE VERSION="010" RELEASE="006" XMLNS="HTTP://WWW.NCPDP.ORG/SCHEMA/SCRIPT">
  <HEADER>
    <TO QUALIFIER="ZZZ">CURES</TO>
    <FROM QUALIFIER="ZZZ">ACME HIT</FROM>
    <MESSAGEID>217823</MESSAGEID>
    <SENTTIME>2018-05-08T19:49:01.0Z</SENTTIME>
    <SECURITY>
      <USERNAMETOKEN>
```

```
<USERNAME>DRJOE@ACME.COM</USERNAME>
</USERNAMETOKEN>
<SENDER>
    <SECONDARYIDENTIFICATION>HOSPITALA</SECONDARYIDENTIFICATION>
</SENDER>
<RECEIVER>
    <SECONDARYIDENTIFICATION>CURES</SECONDARYIDENTIFICATION>
</RECEIVER>
</SECURITY>
</HEADER>
<BODY>
    <RxHISTORYREQUEST>
        <PRESCRIBER>
            <IDENTIFICATION>
                <DEANUMBER>567890</DEANUMBER>
            </IDENTIFICATION>
            <NAME>
                <LASTNAME>SMITH</LASTNAME>
                <FIRSTNAME>KEVIN</FIRSTNAME>
            </NAME>
        </PRESCRIBER>
        <PATIENT>
            <IDENTIFICATION>
                <PATIENTACCOUNTNUMBER>78900</PATIENTACCOUNTNUMBER>
            </IDENTIFICATION>
            <NAME>
                <FIRSTNAME>JANE</FIRSTNAME>
                <LASTNAME>DOE</LASTNAME>
            </NAME>
            <GENDER>F</GENDER>
            <DATEOFBIRTH>
                <DATE>1978-06-04</DATE>
            </DATEOFBIRTH>
            <ADDRESS>
                <ADDRESSLINE1>123 MAIN ST APT#3</ADDRESSLINE1>
                <CITY>SACRAMENTO</CITY>
                <STATE>CA</STATE>
                <ZIPCODE>95814</ZIPCODE>
            </ADDRESS>
        </PATIENT>
        <BENEFITSCOORDINATION>
            <EFFECTIVEDATE>
                <DATE>2015-01-01</DATE>
            </EFFECTIVEDATE>
            <EXPIRATIONDATE>
```

```
<DATE>2015-10-08</DATE>
</EXPIRATIONDATE>
<CONSENT>Y</CONSENT>
</BENEFITSCOORDINATION>
</RxHISTORYREQUEST>
</BODY>
</MESSAGE>
```

Sample Response:

This is the same as the sample response in SearchPatient section.

Sample Error:

This is the same as the sample response in SearchPatient section.

10 CHECK USER STATUS

This web service returns the CURES account status of a prescriber or dispenser. This web service will use the RxHistoryRequest message without the Patient and BenefitsCoordination elements.

Upon successful execution, this method should return an NCPDP status message.

CheckUserStatus Message Samples:

CURL <CURES-URL>/CHECKUSERSTATUS

```
-H "AUTHORIZATION: BASIC <BASE64CREDENTIALS>" \
-H "CONTENT-TYPE: APPLICATION/XML" \
-H "ACCEPT: APPLICATION\XML" \
-H "X-PAYLOAD_FORMAT:NCPDP" \
-H "X-SEARCH_MODE:PARTIAL" \
-H "X-PICKLIST:N"
-D @ CHECK_USER_STATUS.XML
```

CHECK_USER_STATUS.XML:

```
<?XML VERSION="1.0"?>
<MESSAGE VERSION="010" RELEASE="006" XMLNS="HTTP://WWW.NCPDP.ORG/SCHEMA/SCRIPT">
    <HEADER>
        <To QUALIFIER="ZZZ">CURES</To>
        <From QUALIFIER="ZZZ">ACME HIT</From>
        <MESSAGEID>217823</MESSAGEID>
        <SENTTIME>2018-05-08T19:49:01.0Z</SENTTIME>
        <SECURITY>
            <USERNAMETOKEN>
                <USERNAME>ACME-HIT</USERNAME>
            </USERNAMETOKEN>
            <SENDER>
                <SECONDARYIDENTIFICATION>HOSPITALA</SECONDARYIDENTIFICATION>
            </SENDER>
            <RECEIVER>
                <SECONDARYIDENTIFICATION>CURES</SECONDARYIDENTIFICATION>
            </RECEIVER>
        </SECURITY>
    </HEADER>
    <BODY>
        <VERIFY>
            <VERIFYSTATUS>
                <CODE>000</CODE>
            </VERIFYSTATUS>
        </VERIFY>
    </BODY>
</MESSAGE>
```

```
<DESCRIPTION>USER STATUS</DESCRIPTION>
</VERIFYSTATUS>
<PREScriBER>
    <IDENTIFICATION>
        <DEANUMBER>1234678</DEANUMBER>
    </IDENTIFICATION>
    <NAME>
        <LASTNAME>Doe</LASTNAME>
        <FIRSTNAME>JOHN</FIRSTNAME>
    </NAME>
</PREScriBER>
</VERIFY>
</BODY>
</MESSAGE>
```

Sample Response:

```
<MESSAGE VERSION="010" RELEASE="006">
<HEADER>
    <To QUALIFIER="ZZZ">ACME HIT</To>
    <From QUALIFIER="ZZZ">CURES</From>
    <MESSAGEID>217823</MESSAGEID>
    <SENTTIME>2018-05-08T19:49:10.0Z</SENTTIME>
</HEADER>
<BODY>
    <STATUS>
        <CODE>000</CODE>
        <DESCRIPTION>361</DESCRIPTION>
        <DESCRIPTION>ACTIVE STATUS, USER HAS ACCESS</DESCRIPTION>
    </STATUS>
</BODY>
</MESSAGE>
```

Sample Error:

This is the same as the sample response in the SearchPatient section.

11 CHECK ENTITY STATUS

This web service returns the HIT account status. The requesting message should be an NCPDP message with only the header section.

CURL <CURES-URL>/CHECKENTITYSTATUS \

```
-H "AUTHORIZATION: BASIC <BASE64CREDENTIALS>" \
-H "CONTENT-TYPE: APPLICATION/XML" \
-H "ACCEPT: APPLICATION\XML" \
-H "X-PAYLOAD_FORMAT:NCPDP" \
-H "X-SEARCH_MODE:PARTIAL" \
-H "X-PICKLIST:N"
-D @ CHECK_ENTITY_STATUS.XML
```

CHECK_ENTITY_STATUS.XML:

```
<?XML VERSION="1.0"?>
<MESSAGE VERSION="010" RELEASE="006" XMLNS="HTTP://WWW.NCPDP.ORG/SCHEMA/SCRIPT">
    <HEADER>
        <To QUALIFIER="ZZZ">CURES</To>
        <From QUALIFIER="ZZZ">ACME HIT</From>
        <MESSAGEID>217823</MESSAGEID>
        <SENTTIME>2018-05-08T19:49:01.0Z</SENTTIME>
        <SECURITY>
            <USERNAMETOKEN>
                <USERNAME>DRJOE@ACME.COM</USERNAME>
            </USERNAMETOKEN>
            <SENDER>
                <SECONDARYIDENTIFICATION>HOSPITALA</SECONDARYIDENTIFICATION>
            </SENDER>
        </SECURITY>
    </HEADER>
    <BODY>

        <VERIFY>
            <VERIFYSTATUS>
                <CODE>000</CODE>
                <DESCRIPTION>REQUEST USER STATUS</DESCRIPTION>
            </VERIFYSTATUS>
        </VERIFY>
    </BODY>
</MESSAGE>
```

Sample Response:

```
<MESSAGE VERSION="010" RELEASE="006">
<HEADER>
    <To QUALIFIER="ZZZ">ACME HIT</To>
    <From QUALIFIER="ZZZ">CURES</From>
    <MESSAGEID>217823</MESSAGEID>
    <SENTTIME>2018-05-08T19:49:10.0Z</SENTTIME>
</HEADER>
<BODY>
    <STATUS>
        <CODE>000</CODE>
        <DESCRIPTIONCODE>370</DESCRIPTIONCODE>
        <DESCRIPTION>MOU ENTITY ACCOUNT ACTIVE</DESCRIPTION>
    </STATUS>
</BODY>
</MESSAGE>
```

Sample Error:

This is the same as the sample response in the SearchPatient section.

12 AUDIT PATIENT ACTIVITY REPORT

After a patient activity report is received, the HIT system will send an audit message to the AuditPatientActivityReport web service. This web service will use the NCPDP Verify message. A HTTP 200 response code is returned when the message was successfully processed. A HTTP 400 response code is returned when an error occurred.

CURL [<CURES-URL>/AUDITPATIENTACTIVITYREPORT>](#)

```
-H "AUTHORIZATION: BASIC <BASE64CREDENTIALS>" \
-H "CONTENT-TYPE: APPLICATION/XML" \
-H "ACCEPT: APPLICATION\XML" \
-H "X-PAYLOAD_FORMAT:NCPDP" \
-H "X-SEARCH_MODE:PARTIAL" \
-H "X-PICKLIST:N"
-D @ CHECK_ENTITY_STATUS.XML
```

Sample prescriber request:

PATIENT_ACTIVITY_REPORT.XML:

```
<?XML VERSION="1.0"?>
<MESSAGE VERSION="010" RELEASE="006" XMLNS="HTTP://WWW.NCPDP.ORG/SCHEMA/SCRIPT">
  <HEADER>
    <To QUALIFIER="ZZZ">CURES</To>
    <From QUALIFIER="ZZZ">ACME HIT</From>
    <MESSAGEID>217824</MESSAGEID>
    <RELATESTOMESSAGEID>217823</RELATESTOMESSAGEID>
    <SENTTIME>2018-05-08T19:49:01.0Z</SENTTIME>
    <SECURITY>
      <USERTOKEN>
        <USERNAME>DRJOE@ACME.COM</USERNAME>
      </USERTOKEN>
      <SENDER>
        <SECONDARYIDENTIFICATION>HOSPITALA</SECONDARYIDENTIFICATION>
      </SENDER>
      <RECEIVER>
        <SECONDARYIDENTIFICATION>CURES</SECONDARYIDENTIFICATION>
      </RECEIVER>
    </SECURITY>
  </HEADER>
  <BODY>
    <RxHISTORYREQUEST>
      <PREScriber>
```

```

<IDENTIFICATION>
    <DEANUMBER>567890</DEANUMBER>
</IDENTIFICATION>
<NAME>
    <LASTNAME>SMITH</LASTNAME>
    <FIRSTNAME>KEVIN</FIRSTNAME>
</NAME>
</PRESCRIBER>
<PATIENT>
    <IDENTIFICATION>
        <PATIENTACCOUNTNUMBER>78900</PATIENTACCOUNTNUMBER>
    </IDENTIFICATION>
    <NAME>
        <FIRSTNAME>JANE</FIRSTNAME>
        <LASTNAME>DOE</LASTNAME>
    </NAME>
    <GENDER>F</GENDER>
    <DATEOFBIRTH>
        <DATE>1978-06-04</DATE>
    </DATEOFBIRTH>
    <ADDRESS>
        <ADDRESSLINE1>123 MAIN ST APT#3</ADDRESSLINE1>
        <CITY>SACRAMENTO</CITY>
        <STATE>CA</STATE>
        <ZIPCODE>95814</ZIPCODE>
    </ADDRESS>
</PATIENT>
<BENEFITSCOORDINATION>
    <EFFECTIVEDATE>
        <DATE>2015-01-01</DATE>
    </EFFECTIVEDATE>
    <EXPIRATIONDATE>
        <DATE>2015-10-08</DATE>
    </EXPIRATIONDATE>
    <CONSENT>Y</CONSENT>
</BENEFITSCOORDINATION>
</RXHISTORYREQUEST>
</BODY>
</MESSAGE>

```

Sample Dispenser request:

```

<?XML VERSION="1.0"?>
<MESSAGE VERSION="010" RELEASE="006" XMLNS="HTTP://WWW.NCPDP.ORG/SCHEMA/SCRIPT">
    <HEADER>

```

```
<To QUALIFIER="ZZZ">CURES</To>
<From QUALIFIER="ZZZ">ACME HIT</From>
<MessageID>217824</MessageID>
<RelatesToMessageID>217823</RelatesToMessageID>
<SentTime>2018-05-08T19:49:01.0Z</SentTime>
<Security>
    <UsernameToken>
        <Username>DRJOE@ACME.COM</Username>
    </UsernameToken>
    <Sender>
        <SecondaryIdentification>HOSPITALA</SecondaryIdentification>
    </Sender>
    <Receiver>
        <SecondaryIdentification>CURES</SecondaryIdentification>
    </Receiver>
</Security>
</Header>
<Body>
    <RxHistoryRequest>
        <Pharmacy>
            <Identification>
                <StateLicenseNumber>567890</StateLicenseNumber>
            </Identification>
            <Pharmacist>
                <LastName>SMITH</LastName>
                <FirstName>KEVIN</FirstName>
            </Pharmacist>
        </Pharmacy>
        <Patient>
            <Identification>
                <PatientAccountNumber>78900</PatientAccountNumber>
            </Identification>
            <Name>
                <FirstName>JANE</FirstName>
                <LastName>DOE</LastName>
            </Name>
            <Gender>F</Gender>
            <DateOfBirth>
                <Date>1978-06-04</Date>
            </DateOfBirth>
            <Address>
                <AddressLine1>123 MAIN ST APT#3</AddressLine1>
                <City>SACRAMENTO</City>
                <State>CA</State>
                <ZipCode>95814</ZipCode>
            </Address>
        </Patient>
    </RxHistoryRequest>
</Body>
```

```
</ADDRESS>
</PATIENT>
<BENEFITSCOORDINATION>
    <EFFECTIVEDATE>
        <DATE>2015-01-01</DATE>
    </EFFECTIVEDATE>
    <EXPIRATIONDATE>
        <DATE>2015-10-08</DATE>
    </EXPIRATIONDATE>
    <CONSENT>Y</CONSENT>
</BENEFITSCOORDINATION>
</RxHISTORYREQUEST>
</BODY>
</MESSAGE>
```

13 TESTING

13.1 GETTING STARTED

Prior to using the CURES web service, HIT systems will complete two phases of testing. The first phase will be focused on connectivity. HIT systems will specify an IP address for their test server(s) to be whitelisted. A CURES account will then be created for the HIT system.

After connectivity has been established, the HIT system can move on to functional testing. Each HIT system will be given a list of test patients at the beginning of the test process. The HIT system can use these accounts to test all of the REST endpoints.